AMENDMENTS TO THE CLAIMS:

This listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

1. (Currently Amended) n electronic imaging apparatus comprising an optical system comprising an optical component, the optical component comprising:

first optical element having at least one ~~reflective~~ surface ~~or having at least one flat surface and two transparent surfaces,~~ with a refractive power;

chemical substance ~~which enables to change,~~ light transmittance of which is changeable by chemical change according to electric quantity~~,~~; and

second optical element having a ~~transparent~~ transmitting surface or a ~~reflective~~ reflecting surface, ~~and~~

~~an optical system having an~~ wherein the optical component ~~which is arranged so as to sandwich~~ is constructed and arranged so that the chemical substance ~~by~~ is sandwiched between one of optical surfaces of the first optical element and one of optical surfaces of the second optical element.

2. (Currently Amended) An electronic imaging apparatus according to claim 1, wherein ~~the spetrum~~ a spectral transmittance ~~at whole range τmin ≤ τ520 ≤ τmax~~ of the optical component satisfies the following ~~condition when the whole transmittance of the first optical element, the chemical substance and the second optical element at the wavelength of 520 nm is τ520~~ conditions in any state of the optical component in a range from a state where $\tau 520$ takes a minimum value with the chemical substance being in a most opaque state to a state where $\tau 520$ takes a maximum value with the chemical substance being in a most transparent state:

$$0.70 < \tau 440/\tau 520 < 1.20$$

$$0.80 < \tau 600/\tau 520 < 1.30$$

where ~~τX (x is a number) is the transmittance of the whole optical system containing the first optical element, the chemical substance and the second optical element at the wavelength of x~~

~~nm. That is,~~ τ520 is a transmittance of the optical component as a whole, as comprising the first optical element, the chemical substance and the second optical element, for a wavelength of 520nm, τ440 is ~~the~~ a transmittance of ~~light at~~ the optical component as a whole, as comprising the first optical element, the chemical substance and the second optical element, for a wavelength of 440nm, and τ600 is ~~the~~ a transmittance of ~~light at~~ the optical component as a whole, as comprising the first optical element, the chemical substance and the second optical element, for a wavelength of 600nm. ~~τmin is the minimum transmittance when the chemical substance which enables to change transmittance is in the most opaque state and τmax is the maximum transmittance when the chemical substance which enables to change transmittance can be changed is in the most transparent state~~.

3. (Currently Amended) An electronic imaging apparatus ~~according to claim 1,~~ comprising ~~the~~:

an optical system comprising an optical component, the optical component comprising:

a first optical element having at least one surface with a refractive power or at least having one plane surface and two transmitting surfaces;

chemical substance, light transmittance of which is changeable by chemical change according to electric quantity; and

a second optical element having a transmitting surface or a reflecting surface; and

an electronic imaging element for converting an object image obtained through the optical system into an electric signal,

wherein the optical component is constructed and arranged so that the chemical substance is sandwiched between one of optical surfaces of the first optical element and one of optical surfaces of the second optical element, and

wherein the optical system and the electronic imaging element satisfy the following condition ~~is satisfied~~:

$$F > a \ (a \leq 3.5/\mu m)$$

where F is a fully opened F value of the ~~said~~ optical system under a condition where a focal length is in ~~the~~ a shortest state, and reference symbol a represents a pixel pitch ~~(micrometer)~~ in micrometer of ~~a picture~~ the electronic imaging element in ~~the~~ a horizontal or ~~the~~ vertical direction of the electronic imaging element ~~which converts an object image obtained through the optical system into an electric signal~~.

4. (Currently Amended) An electronic imaging apparatus according to claim 1, wherein a lens group ~~at the~~ arranged on an utmost image side in the optical system is fixed ~~when~~ in a magnification ~~is changed~~ change.

5. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 1, wherein a lens group ~~at the~~ arranged on an utmost image side in the optical system ~~is constituted, as a whole, with~~ consists of one lens component, and one of ~~the~~ optical elements having a refractive power constituting the lens component of the lens group arranged on the utmost image side in the optical system is the first optical element.

6. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 1, wherein ~~a~~ an utmost image-side movable group ~~at the utmost image side~~ in the optical system has focusing function.

7. (Canceled).

8. (Currently Amended) An electronic imaging apparatus ~~according to claim 7,~~ comprising an optical system comprising an optical component, the optical component comprising:

a first optical element having at least one surface with a refractive power or at least having one plane surface and two transmitting surfaces;

chemical substance, light transmittance of which is changeable by chemical change according to electric quantity; and

a second optical element having a transmitting surface or a reflecting surface,

wherein the optical component is constructed and arranged so that the chemical substance is sandwiched between one of optical surfaces of the first optical element and one of optical surfaces of the second optical element,

wherein the first optical element is ~~the~~ constructed as a prism, arranged to be contacted, at an exit surface thereof, with the chemical substance ~~is arranged so as to be contacted with one of the flat surface of the prism~~, and the second optical element is arranged ~~so that the flat surface of the second optical element is~~ to be contacted, at a plane surface thereof, with the chemical substance from an opposite side of the prism, and~~,~~

wherein one of the optical surfaces of the ~~second~~ first optical element is ~~constituted~~ configured as a reflecting surface for bending ~~the~~ an optical path.

9. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 1, wherein the optical system is ~~constituted with~~ constructed as a zoom lens.

10. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 9, wherein ~~the~~ a thickness of the zoom lens from ~~the~~ a vertex of an utmost object-side surface ~~top of the utmost object side~~ to an imaging position ~~of the zoom lens~~ is less than 20mm in ~~the~~ a state ~~that~~ where the zoom lens is collapsed in the electronic imaging apparatus.

11. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 9, ~~comprising~~ wherein a prism and at least one reflecting surface for bending an optical path ~~at the~~ are arranged on an object side ~~than the~~ of an utmost object-side lens ~~of the utmost object side~~ in all ~~group which is~~ groups that are movable ~~when~~ in a magnification ~~is changed~~ change.

12. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 11,

wherein the first optical element is the prism, arranged to be contacted, at one of plane surfaces thereof, with the chemical substance ~~is arranged so as to be contacted with one of flat surfaces of the prism~~, and the second optical elements is arranged ~~so that the flat surfaces~~

~~of the second optical element is~~ to be contacted, at a plane surface thereof, with the chemical substance from ~~the~~ an opposite side of the prism, and

wherein either one of ~~the~~ optical surfaces of the second optical element is constituted as a reflecting surface for bending ~~the~~ an optical path.

13. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 12, wherein the prism is arranged~~, developed~~ on an utmost object side in the optical system, from an object along the optical path ~~from an object, at the utmost object side in the optical system~~.

14. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 13, wherein ~~a~~ an utmost object-side surface of the prism ~~at the utmost object side, developed~~ along the optical path from the object~~,~~ is concave.

15. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 6, wherein the optical system is an image forming optical system comprising at least a lens group having a positive ~~refracting~~ refractive power which moves monotonously toward ~~the~~ an object side ~~when the~~ in a magnification ~~is changed~~ change from ~~the~~ a wide angle end to ~~the~~ a telephoto end.

16. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 15, wherein the lens group ~~is constituted with two groups having three lenses~~ has two-component-three-element configuration, ~~where~~ constructed of a positive single lens and a cemented lens having a positive lens element and a negative lens element ~~are~~ arranged in order from the object side.

17. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 15, wherein the lens ~~groups~~ group is arranged ~~at the~~ on an image side ~~than~~ of an aperture stop ~~side~~.

18. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 17, ~~comprising~~ wherein a position of the aperture stop ~~whose position~~ in ~~the~~ a direction of ~~the~~ an optical axis is fixed ~~when~~ in a magnification ~~is changed~~ change, and a lens group ~~having~~ that has a negative ~~refracting~~ refractive power ~~which~~ and that moves ~~toward the object side than~~ in a magnification change is arranged on an object side of the aperture stop ~~side when magnification is changed~~.

19. (Currently Amended-Withdrawn) An electronic imaging apparatus according to claim 18, wherein the lens group having a negative refractive power is constituted, in order from the object side, with a double concave ~~lense~~ lens and a positive lens.

20. (Currently Amended) An electronic imaging apparatus according to claim 8, wherein ~~the refraction~~ a refractive index of the prism is ~~1.68 or more~~ equal to or greater than 1.68.

21. (Currently Amended) An electronic imaging apparatus according to claim 1, further comprising ~~means~~ a control unit for electrically controlling ~~electrically~~ a state of the optical system, an electric signal in relation with a picture image obtained from ~~a state of the optical system and~~ the imaging element, and the light transmittance of the ~~medium~~ chemical substance, respectively.

22. (Currently Amended) An electronic imaging apparatus comprising:

an optical system comprising an optical component, the optical component comprising:

a first optical element having a ~~flat~~ plane surface and a surface with ~~refracting~~ a refractive power~~,~~ or a ~~flat~~ plane surface and a reflecting surface~~,~~;

~~a~~ chemical substance ~~which enables to change~~, light transmittance of which is changeable by chemical change according to electric quantity~~,~~; and

a second optical element having a ~~transparent~~ transmitting ~~surface~~ or ~~a~~ reflecting surface and a ~~flat~~ plane surface~~,~~; and ~~an optical system having~~

an electronic imaging element for converting an object image obtained through the optical system into an electric signal,

wherein the optical component ~~arranged so as to sandwich~~ is constructed and arranged so that the chemical substance ~~by~~ is sandwiched between the ~~flat~~ plane surface of the first optical element and the ~~flat~~ plane surface of the second optical element, and

wherein the optical system and the electronic imaging element satisfy the following condition:

$$F > a \ (a \leq 3.5/\mu m)$$

where F is a fully opened F value of the optical system under a condition where a focal length is in a shortest state, and reference symbol a represents a pixel pitch in micrometer of the electronic imaging element in a horizontal or vertical direction of the electronic imaging element.

23. (Currently Amended) An electronic imaging apparatus according to claim 1, wherein the first optical element is either one of a lens having a surface with ~~refracting~~ a refractive power and a ~~flat~~ plane surface, a lens consisting of ~~only~~ surfaces ~~with refracting~~ each having a refractive power, a prism ~~or~~, and a variable shape mirror.

24. (Currently Amended) An electronic imaging apparatus according to claim 1 ~~or 22~~, wherein the second optical element is either one of a parallel plane board, a lens having a surface with ~~refracting~~ a refractive power and a ~~flat~~ plane surface ~~or~~, and a lens consisting of ~~only~~ surfaces ~~with refracting~~ each having a refractive power.

25. (Currently Amended) An electronic imaging apparatus according to claim 1 ~~or 22~~, ~~using an~~ wherein the optical ~~system wherein~~ component satisfies the following condition ~~is satisfied~~:

$$-0.05 < (R_A - R_C)/(R_A + R_C) < 0.05$$

where R_A is a curvature radius of the surface of the first optical element contacted with the chemical substance and R_C is a curvature radius of the surface of the second optical element contacted with the chemical substance.

26. (New) An electronic imaging apparatus according to claim 22, wherein the second optical element is either one of a parallel plane board, a lens having a surface with a refractive power and a plane surface, and a lens consisting of surfaces each having a refractive power.

27. (New) An electronic imaging apparatus according to claim 22, wherein the optical component satisfies the following condition:

$$-0.05 < (R_A - R_C)/(R_A + R_C) < 0.05$$

where R_A is a curvature radius of the surface of the first optical element contacted with the chemical substance and R_C is a curvature radius of the surface of the second optical element contacted with the chemical substance.